

1 What is claimed is:

2

3 **1.** A method for selectively shadowing only accesses to external storage media connected to
4 a computer, the method comprising:
5 detecting a data access to an external storage medium; and
6 writing a copy of the accessed data to a storage location other than the external storage
7 medium;

8

9 **2.** The method of claim 1 wherein the access is a write operation.

10

11 **3.** The method of claim 1 wherein the access is a read operation.

12

13 **4.** The method of claim 1 wherein the detecting step comprises:

14 intercepting an I/O request from the computer to an external storage media drive in
15 which the external storage media is inserted.

16

17 **5.** The method of claim 4 wherein the I/O request is one of the group consisting of a file open
18 or creation request, a write request, a file close request, a file system control request and a
19 read request.

20

21 **6.** The method of claim 5 further comprising:

22 providing a proxy handler for the I/O request; and
23 executing the proxy handler, in response to the detecting step.

24

25 **7.** The method of claim 4 wherein the computer runs under a Windows operating system and
26 the I/O request is one of the group consisting of IRP_MJ_CREATE, IRP_MJ_WRITE,
27 IRP_MJ_CLOSE, IRP_MJ_FILE_SYSTEM_CONTROL and IRP_MJ_READ packets.

28

1 **8.** The method of claim 7 further comprising:

2 providing proxy handlers for the IRP_MJ_CREATE, IRP_MJ_WRITE,
3 IRP_MJ_CLOSE and IRP_MJ_FILE_SYSTEM_CONTROL packets; and
4 executing one of the proxy handlers, in response to the detecting step when the I/O
5 request is a respective packet selected from the group consisting of IRP_MJ_CREATE,
6 IRP_MJ_WRITE, IRP_MJ_CLOSE and IRP_MJ_FILE_SYSTEM_CONTROL packets.

7
8 **9.** The method of claim 8 further comprising:

9 providing a proxy handlers for the IRP_MJ_READ packet; and
10 executing the proxy handlers for the IRP_MJ_READ packet, in response to the
11 detecting step when the I/O request is an IRP_MJ_READ packet.

12
13 **10.** The method of claim 1 wherein the storage location other than the external storage media
14 is a protected storage location.

15
16 **11.** The method of claim 1 further comprising:

17 writing the data to the external storage medium after the step of writing a copy of the
18 data to a storage location other than the external storage medium.

19
20 **12.** The method of claim 1 further comprising:

21 attaching to one or more file systems connected to an external storage media drive in
22 which the external storage medium is inserted; and

23 wherein the detecting step comprises intercepting I/O requests to the one or more file
24 systems.

25
26 **13.** The method of claim 1 wherein the external storage medium is selected from the group
27 consisting of a floppy disk; a CD, a removable hard disk drive, and a zip disk drive.

28

1 **14.** The method of claim 1 further comprising:

2 collecting the copy into a database where similar copies are collected; and
3 querying the database.

4
5 **15.** The method of claim 14 wherein the database comprises records, each record comprising
6 the copied data, a file name associated with the data, an identification of who initiated the
7 data access, a station ID, and when the access was made.

8
9 **16.** The method of claim 14 wherein the computer is connected to a computer network, and
10 the detecting and copying steps are performed at the computer, and the collecting and
11 querying steps are performed at another computer on the network.

12
13 **17.** The method of claim 14 wherein the collecting and querying steps are performed by a
14 user with administrator privileges.

15
16 **18.** A computer readable medium on which is embedded computer software, the software
17 performing a method, the method comprising:
18 detecting a data access to an external storage medium; and
19 writing a copy of the accessed data to a storage location other than the external storage
20 medium;

21
22 **19.** The computer readable medium of claim 18 wherein the access is a write operation.

23
24 **20.** The computer readable medium of claim 18 wherein the detecting step comprises:
25 intercepting an I/O request from the computer to an external storage media drive in
26 which the external storage media is inserted.

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1 **21.** The computer readable medium of claim 20 wherein the computer system runs under a
2 Windows operating system and the I/O request is one of the group consisting of
3 IRP_MJ_CREATE, IRP_MJ_WRITE, IRP_MJ_CLOSE,
4 IRP_MJ_FILE_SYSTEM_CONTROL and IRP_MJ_READ packets.
5

6 **22.** An apparatus for selectively shadowing only accesses to external storage media
7 connected to a computer, the apparatus comprising:
8 a detector that receives I/O requests to an external storage medium; and
9 a storage, other than the external storage medium, connected to the detector, in which
10 a copy of the accessed data is written.
11

12 **23.** The apparatus of claim 22 further comprising
13 one or more proxy handlers connected to the detector, wherein the proxy handlers
14 handle certain I/O requests.
15

16 **24.** The apparatus of claim 23 wherein the certain I/O requests comprise IRP_MJ_CREATE,
17 IRP_MJ_WRITE, IRP_MJ_CLOSE and IRP_MJ_FILE_SYSTEM_CONTROL packet.
18

19 **25.** The apparatus of claim 24 wherein the certain I/O requests further comprise an
20 IRP_MJ_READ packet.
21

22 **26.** The apparatus of claim 23 further comprising:
23 a list, connected to at least some of the one or more proxy handlers, in which file
24 identifiers are contained.
25

26 **27.** The apparatus of claim 26 wherein the file identifiers are IRP.FsContext values.
27
28

- 1 **28.** The apparatus of claim 23 further comprising:
2 one or more counters, connected to at least some of the one or more proxy handlers,
3 by which certain file operations are counted.
4
5 **29.** The apparatus of claim 23 wherein the computer runs under a Windows operating
6 system, and the one or more proxy handlers are connected to I/O request packet drivers
7 supplied by the operating system.
8
9 **30.** The apparatus of claim 23 wherein the Windows operating system is selected from the
10 group consisting of Windows NT and Windows 2000.
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